CLAIMS

What is claimed and desired to be secured by Letters Patent is as follows:

1. A combination adjuvant, comprising:

   a plurality of water-soluble nitrogen-based fertilizer granules; and

   a drift reducing agent;

   wherein said drift reducing agent is impregnated within the outer portion of said granules.

2. The combination adjuvant as claimed in claim 1, wherein said fertilizer granules are ammonium sulfate granules.

3. The combination adjuvant as claimed in claim 2, wherein said drift reducing agent is selected from the group consisting of anionic polyacrylamide; non-ionic polyacrylamides; cationic polyacrylamides; polymers of acrylic acid; copolymers of acrylic acid; methacrylic acids and their salts; methylacrylamides and their copolymers, derivatives and mixtures thereof; polyacrylonitrile, its hydrolysis products, and copolymers, derivatives and mixtures thereof; polymers of ethylene oxides; and polymers of alkylene oxides.

4. The combination adjuvant as claimed in claim 3, wherein said drift reducing agent is polyacrylamide.

5. The combination adjuvant as claimed in claim 4, wherein said drift reducing agent is anionic polyacrylamide.

6. The combination adjuvant as claimed in claim 3, further comprising a drying agent selected from the group consisting of sodium sulfate, calcium bentonite, diatamaceouos silica, polyethylene glycol (flakes, prill or powder), calcium silicate, magnesium silicate, aluminum silicate, sodium silicate, polyvinylpyrrolidone, polysaccharide, free flowing silica, mica, cellulose powder, kraft lignin, lignosulfonates, sulfosuccinates, sodium salt of polymerized naphthalene sulfonic acid, sodium salt of carboxylated polyelectrolyte, POE stearates, dioleates, sodium butyl naphthalene sulfonates, sodium sulfonate of naphthalene formaldehyde condensate, di-n-butyl sodium naphthalene sulfonate, di-isopropyl sodium naphthalene sulfonate, sodium dodecylbenzene sulfonate, polyacrylates, polycarboxylates, solid block co-polymers, POE lauryl alcohol and sorbitan stearates.
7. The combination adjuvant as claimed in claim 6, wherein said drying agent is sodium sulfate.
8. The combination adjuvant as claimed in claim 3, further comprising an anti-caking agent selected from the group consisting of silicon dioxide, tricalcium phosphate, silicas (fumed or free flowing), hydrophobic starch derivatives, powdered cellulose, calcium silicate, magnesium silicate, aluminum silicate, sodium silicate, polyacrylic acid and sodium salts thereof, and sodium polyalkyl naphthalene sulfonate.
9. The combination adjuvant as claimed in claim 8, wherein said anti-caking agent is silicon dioxide.

10. The combination adjuvant as claimed in claim 6, further comprising an anti-caking agent, selected from the group consisting of silicon dioxide, tricalcium phosphate, silicas (fumed or free flowing), hydrophobic starch derivatives, powdered cellulose, calcium silicate, magnesium silicate, aluminum silicate, sodium silicate, polyacrylic acid and sodium salts thereof, and sodium polyalkyl naphthalene sulfonate.

11. A combination adjuvant, comprising:

a plurality of ammonium sulfate granules;

a polyacrylamide drift reducing agent, wherein said polyacrylamide drift reducing agent is impregnated within the outer portion of said ammonium sulfate granules;

sodium sulfate; and

silicon dioxide.

12. A method for making a combination adjuvant, comprising the steps of:

providing a liquid drift reducing agent;

providing ammonium sulfate granules; and

mixing said liquid drift reducing agent with said ammonium sulfate granules until thoroughly mixed to form an ammonium sulfate/drift reducing agent mixture.

13. The method as claimed in claim 12, wherein said liquid drift reducing agent comprises between 0.01 and 25.0 weight percent of the ammonium sulfate/drift reducing agent mixture.

14. The product produced according to the method of claim 12.

15. The method as claimed in claim 12, further comprising the steps of:

adding to said ammonium sulfate/drift reducing mixture a drying agent selected from the group consisting of sodium sulfate, calcium bentonite, diatamaceouos silica, polyethylene glycol (flakes, prill or powder), calcium silicate, magnesium silicate, aluminum silicate, sodium silicate, polyvinylpyrrolidone, polysaccharide, free flowing silica, mica, cellulose powder, kraft lignin, lignosulfonates, sulfosuccinates, sodium salt of polymerized naphthalene sulfonic acid, sodium salt of carboxylated polyelectrolyte, POE stearates, dioleates, sodium butyl naphthalene sulfonates, sodium sulfonate of naphthalene formaldehyde condensate, di-n-butyl sodium naphthalene sulfonate, di-isopropyl sodium naphthalene sulfonate, sodium dodecylbenzene sulfonate, polyacrylates, polycarboxylates, solid block co-polymers, POE lauryl alcohol and sorbitan stearates; and

mixing said drying agent with said ammonium sulfate/drift reducing agent mixture.

16. The method as claimed in claim 15, further comprising the steps of:

adding to said ammonium sulfate/drift reducing agent mixture an anti-caking agent selected from the group consisting of silicon dioxide, tricalcium phosphate, silicas (fumed or free flowing), hydrophobic starch derivatives, powdered cellulose, calcium silicate, magnesium silicate, aluminum silicate, sodium silicate, polyacrylic acid and sodium salts thereof, and sodium polyalkyl naphthalene sulfonate; and

mixing said anti-caking agent with said ammonium sulfate/drift reducing agent mixture and said drying agent to form an adjuvant mixture.

17. The product produced according to the method of claim 16.

18. The method as claimed in claim 16, wherein said liquid drift reducing agent is liquid polyacrylamide.

19. The method as claimed in claim 18, wherein said drying agent comprises between 0.01 and 20.0 weight percent of said adjuvant mixture and said anti-caking agent comprises between 0.01 and 20.0 weight percent of said adjuvant mixture.

20. The product produced according to the method of claim 19.